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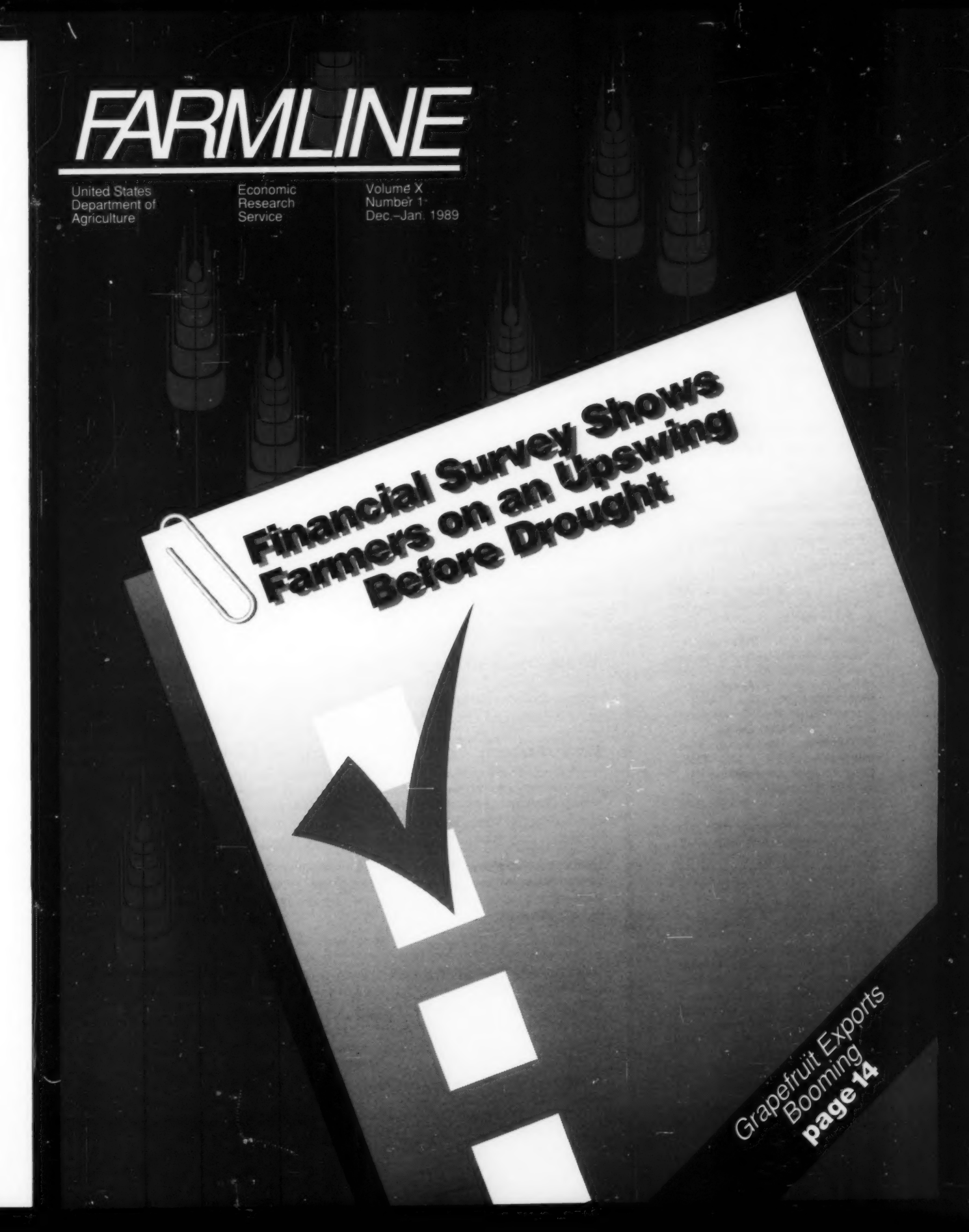

TAKE PRIDE IN AMERICA

Editor
Jack Harrison

Editorial Assistant
Martha R. Evans

(202) 786-1494

Assistant editors: Doug Martinez, Juliana King, Judith Foulke.
Art director: Richard J. Barnes

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PERSPECTIVES

U.S. AGRICULTURAL EXPORTS, although likely to be lower in volume in fiscal 1989, should be higher in value. Preliminary forecasts show volume falling about 8% from 1988's 148 million tons and value increasing about $1 billion from last year's $35.3 billion.

These and other forecasts were presented at USDA's 65th annual Agricultural Outlook Conference, held recently in Washington, D.C. Economic Research Service economists and other experts who were on the conference program discussed farm sector financial prospects, the supply-demand outlook, and agricultural trade issues.

Some highlights included:

The U.S. share of world markets for some drought-affected products is likely to shrink. The volume of U.S. wheat exports could drop by about 4% due to higher prices, but value could rise from $4.6 billion in fiscal 1988 to $5.9 billion this year. The volume of coarse grain exports is expected to be down slightly, but higher prices could raise the value from $5.2 billion to $6.4 billion. Exports of oilseeds and products are forecast at 20.4 million tons and $6.9 billion, down about 8 million tons and $1.1 billion. Exports of U.S. cotton are projected to be 1.1 million tons and $1.5 billion, down 300,000 tons and $600 million from the previous year. Horticultural products could reach $4.1 billion, up $300 million. Exports of livestock, dairy, and poultry are likely to remain at about $6.1 billion.

The 1988 drought sharply cut U.S. and Canadian grain and oilseed crops. Early in 1989, crop prices will continue to reflect the smaller world supplies. But expanded output is likely in the second half of 1989. Season-average prices in 1988/89 are projected to be up 40-50% for wheat, 30-40% for corn, and 20-30% for soybeans.

U.S. farmers can expect slightly higher receipts in 1989 than the $148-$150 billion of the previous year. But producers will be getting less in direct government payments, and their production expenses will rise with expanded acreage and costlier inputs. Therefore, net cash farm income in 1989 is likely to fall about 10% from 1988's record-tying estimate of $56-$58 billion. Net farm income, because of an increase in inventories, could be about 20% above 1988's $38-$40 billion.

Consumer food prices are likely to increase at a moderate 3% to 5% in 1989, held back by larger crop output, near-record meat supplies, and only slight inflation. The 1988 rise in food prices is estimated at only 4%, despite higher prices for some drought-reduced crops.

* * * * *

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FARMLINE

AGRICULTURE...NATURAL RESOURCES...RURAL DEVELOPMENT
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FEATURES

Survey Shows Farmers on Upswing Before Drought *by Eric Van Chantfort* 4

Many U.S. farmers were better able to cope with the effects of the 1988 drought because 1987 was a year of broad-based improvement in the financial condition of the farm sector. This has been confirmed by detailed information from the annual USDA Farm Costs and Returns Survey. The next survey, covering 1988, will be taken soon.

Specialty Produce: A Possibility for Diversification *by Juliana King* 11

A number of specialty produce items, including vegetables, fruits, and herbs, have been increasing in popularity among U.S. consumers. These commodities represent an opportunity for some farmers to diversify their operations. But learning to grow and market new crops is not easy.

Grapefruit Exports Lead U.S. Citrus Recovery *by Doug Martinez* 14

The 1987/88 marketing year saw a sharp increase in exports of U.S. fresh grapefruit and a growing demand for grapefruit juice in this country. Prices received by growers were up. These trends indicate that producers are recovering from the damaging freezes that hit Florida in the early 1980's.

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Financial Survey Shows Farmers On an Upswing Before Drought

While many agricultural economists are busy assessing the events of 1988, or peering into the year ahead, others are analyzing an abundance of new data on 1987.

The data confirm that 1987 was a year of broad-based improvement in the financial condition of the U.S. farm sector, according to USDA's Economic Research Service.

That improvement, say the economists, accelerated the recovery that began a year or two earlier after an extended period of financial stress. As a result, many farmers were in a better position to cope with the effects of the 1988 drought—the worst in 50 years.

A brief overview of 1987's vital statistics shows a modest upturn in farm receipts, a 42-percent increase in federal farm program payments, generally stable production expenses, and record-high farm income. After declining for 6 straight years, the farm sector's equity (net worth) rose 6 percent to an estimated $566 billion, spurred by higher land values and continued reductions in debt.

These aggregate numbers provide the big picture, but how do the numbers break down among the nation's farmers and ranchers? The answers are found in USDA's latest Farm Costs and Returns Survey—the basis for the new information on 1987.

The survey revealed that, compared with 1986, more farms had positive incomes, fewer farms were carrying high debt loads, and the percentage of farms in a financially "favorable" position increased sharply.

The gains did not reach all farms. Of the 2.2 million U.S. farms, an estimated 101,000 were rated as "vulnerable" to failure. They ended 1987 with a troubling combination of high debts and negative net farm incomes.

The Farm Costs and Returns Survey is conducted each year by the National Agricultural Statistics Service and its state offices. The information comes directly from farmers. The Economic Research Service analyzes the survey data and presents its findings in several major reports. Both agencies are part of USDA.

"Overall, 1987 was probably the best year for the farm sector in this decade."

The last survey, taken early in 1988, collected data on 1987 costs of production, farm production expenditures and capital outlays, income, debts and assets, production practices, and other farm business and operator characteristics. The recently published results provide the most current data available on the financial performance of farm operators. Similar information will soon be collected to measure changes in the financial health and well-being of farms during this past drought year.

Fewer High-Debt Farms

"Overall, 1987 was probably the best year for the farm sector in this decade," says ERS economist Mitch Morehart, one of the primary analysts of the survey.

"That wasn't true for all farm types and all regions of the country," he adds, "and some farmers were still struggling to stay afloat as 1988 began. Also, we can assume that at least part of the general recovery in 1987 reflects the fact that some of the most severely stressed farmers had already left agriculture."

To assess financial conditions throughout the farm sector, Morehart and his colleagues examined a number of indicators, including various measures of debt, income, and combined debt-income status. Survey results for 1987 are applicable to an estimated 1.7 million of the nation's farms. (The remaining half-million U.S. farms are mainly smaller ones, which are not as fully represented in the survey sample.)

"The improvement was most dramatic in terms of debt reduction," says Morehart. "Farmers paid more attention to debt structure in 1987, and they used their improved earnings to pay off debt." Modest increases in land values also helped to reduce debt-asset ratios.

Among surveyed farm operators, the average ratio of farm debts to farm assets dropped to 15 percent in 1987 from 22 percent in 1986.

Detailed information on the distribution of the debt burden shows that 44 percent of the farms ended 1987 without any outstanding debt. That compares with about 40 percent of farms in the two previous years. Although these no-debt farms are generally the smaller ones, the reduction in debt levels occurred in all sales classes.

However, the debt or no-debt distinction is probably not the most important one because debt financing is a common practice in commercial farming.

Instead, the economists try to separate farms with manageable debts from those with debt levels that could have an adverse effect on the financial position of the farm business. They use a debt-asset ratio of 40 percent as the dividing line because that's where financial analysts found that farmers began to encounter repayment problems in the early 1980's. (This same dividing line is used each year to maintain historical perspective.)

If a farm's debts amount to 40 percent or less of its assets, it is considered a *low-debt* farm. A *high-debt* farm has debts equal to more than 40 percent of its assets.

In 1987, low-debt farms (including those without any debt) accounted for 85 percent of all farms represented in the survey, up from 79 percent in 1986. The remaining 15 percent were in the high-debt category, and some were technically insolvent with debts equal to or greater than their assets.

Not surprisingly, debt levels increased with farm size. Among farms with sales of less than $10,000, only about 10 percent were in a high-debt position, compared with nearly 30 percent of farms in the $500,000-and-up sales class.

More Farms with Positive Incomes

Debt is only part of the picture for any

business. The income ledger is also extremely important. Net earnings not only determine the ability of the farm business to pay principal and interest charges on outstanding debt, but also provide funds for new investment and family living expenses.

The two most common measures of net returns to the farm business are *net farm income* and *net cash farm income*.

Net farm income, Morehart explains, is a longer term measure of the ability of the farm to survive as a viable income-earning business. It takes into account changes in the value of crop and livestock inventories, depreciation, and "nonmoney" income, such as the rental value of the farmhouse (which is important in determining the viability of small farms).

Net cash farm income, a shorter term cash flow measure, is basically gross cash earnings from farming minus farm cash expenses. It indicates how much cash is left to meet family needs, pay income taxes, make payments on debt principal, and handle other expenses.

Of all farms represented in the survey, 78 percent had positive net farm incomes in 1987, up from 69 percent in 1986. The gain for net cash farm income was less impressive—57 percent positive in 1987, up from 53 percent.

By both measures, the majority of farms were profitable in 1987, and it was a growing majority, says Morehart. Moreover, the improvements were recorded across all sales classes, except—in the case of net cash farm income—for the $500,000-and-up farms.

The highest percentages of farms with positive incomes were in the middle—commercial-size farms with annual sales between $40,000 and $499,999. In 1987, 80-81 percent of farms in these sales classes had positive net farm incomes, and 82-86 percent had positive net cash farm incomes.

In his evaluation of farm financial conditions, Morehart focused more on net farm income. This measure recognizes the importance of depreciation on the expense side and inventory accumulation, or drawdown, on the income side.

"Inventories represent income, even if they are built up and held for sale after the year ends because of tax or other considerations. Also, net farm income is less likely to understate the survivability of small, part-time farms which continue to operate year after year despite negative net cash farm incomes," says Morehart.

Included in his analysis was a look at several profitability ratios. One of these ratios is return on equity—basically the rate of return on the farmer's investment, or equity, in the operation. A 1-percent return would indicate that the operation earned $1 in net farm income for every $100 in equity, after deducting for the value of operator labor and management.

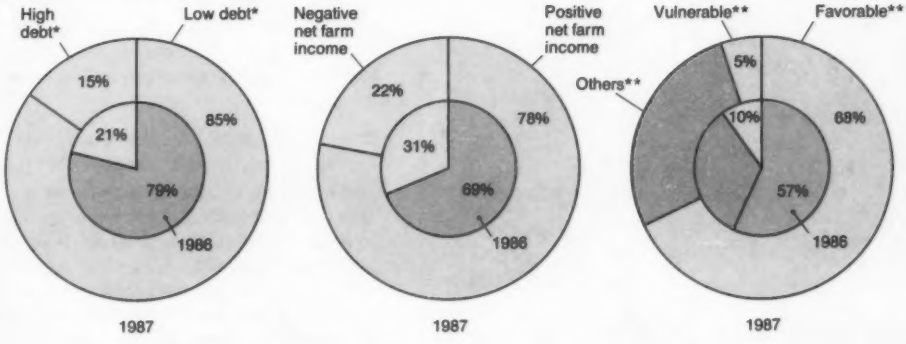
The average return on equity reported by farm operators increased from 0.7 percent in 1986 to 2.9 percent in 1987. Although nonfarm businesses and investors often expect higher returns, 2.9 percent is comparable to the farm sector's average returns to equity during the early 1970's.

Favorable Versus Vulnerable

No single measure can capture all the possible variations in a farm's financial profile, but the debt and income measures,

Fewer Farms Had High Debts or Negative Incomes in 1987, and Only 5% of Farms Were Rated Vulnerable, Down from 10% in 1986

Percentage of farms by financial condition:



Selected Characteristics of Farms by Favorable and Vulnerable Status

	Favorable	Vulnerable
Average age of operator	55	44
Average acres operated	417	584
Average acres owned	256	328
Percent of acres owned	61%	56%
Average debt-asset ratio	7%	67%
Average return on equity	5.8%	-44.9%

*High debt is defined as a debt-asset ratio greater than 40%. Low debt indicates a ratio of 40% or less. **A vulnerable rating indicates high debt plus a negative net farm income. A favorable rating indicates low debt plus a positive income. Farms in the "others" group either have positive incomes with high debt (12% in 1986, 10% in 1987) or negative incomes with low debt (21% in 1986, 17% in 1987).
Source: Farm Costs and Returns Survey for 1987.

when taken separately, have obvious limitations.

"If a farm or ranch regularly generates enough income to service its debt and meet all its other financial obligations, a high debt-asset ratio may be perfectly acceptable," Morehart says. "Similarly, a year or two of negative net income may not pose a serious threat if the operation is carrying a very low debt load and can borrow against equity."

For a better indicator of financial strength or problems, ERS economists combine the debt and income measures.

A farm with both a high debt and a negative income is considered *vulnerable* to default on its financial obligations. A farm with a low debt and positive income is considered to be in a *favorable* financial position that year.

Using net farm income as the earnings measure, 68 percent of the farms represented in the latest Farm Costs and Returns Survey rated favorable. That was up sharply from 57 percent of farms in 1986.

At the same time, the percentage of farms rated vulnerable was cut in half. Only 5 percent of farms were in this problem category in 1987, down from 10 percent the previous year. When the survey results are expanded to cover all U.S. farms, an estimated 204,000 were vulnerable in 1986, with both high debts and negative net farm incomes. In 1987, the figure dropped to 101,000 farms.

Morehart found several significant differences between farms rated favorable and those rated vulnerable. Vulnerable farms, generally, had younger operators (average age of 44) than farms rated favorable (average age 55). Vulnerable operators farmed more acres on average and owned a somewhat smaller percentage of those acres than operators of favorable-status farms.

But the greatest differences were in the financial ratios. The average debt-asset ratio reported by operators of favorable farms was 7 percent, compared with 67 percent for vulnerable farms. Favorable farms boasted a respectable 5.6-percent average return on equity. Vulnerable farms were struggling, with an average return of −44.9 percent. For every $100 in owned assets, they recorded a loss of nearly $45 in net farm income.

No doubt, some of these farms survived this past year through debt restructuring, cost cutting, and the sale of assets, says Morehart. Others almost certainly faced liquidation.

The overall rates of vulnerability were highest among the largest farms. Often, though, it is the midsize farms that have the most difficulty handling a serious financial squeeze. Large farms tend to have more assets that can be sold off without jeopardizing the entire operation, and small farms depend more on off-farm income than agricultural earnings.

Financial Conditions by Region

Besides differences related to farm size, the Farm Costs and Returns Survey per-

Although Differences Persist, Improvements in Debt and Income Measures Were Widespread Among Regions and Farm Types from 1986 to 1987

	Debt				Income			
	Percent of farms with low debt[1]		Average debt-asset ratio[2]		Percent of farms with positive net farm income[3]		Average return on equity[4]	
	1986	1987	1986	1987	1986	1987	1986	1987
	percentages							
All farms[5]	79	85	22	15	69	78	0.7	2.9
Region								
Northern Plains	67	80	30	20	72	78	0.5	5.8
Corn Belt	75	83	26	18	70	83	0.6	3.8
Lake States	68	78	32	22	69	74	−0.2	−0.4
Appalachia	88	91	11	11	79	80	3.2	4.4
Northeast	86	90	12	9	72	75	1.6	2.1
Southeast	83	90	22	12	69	78	−2.6	2.6
Delta	81	87	21	13	63	79	10.0	4.9
Southern Plains	84	88	14	10	55	77	−1.9	1.9
Mountain	81	84	22	16	60	75	−1.9	2.0
Pacific	83	84	22	16	67	75	2.3	2.3
Production specialty								
Cash grain	68	80	30	20	66	79	0.2	3.1
Cotton	64	76	19	20	67	79	6.3	5.6
Tobacco	83	87	32	13	78	85	0.6	0.3
Other field crops	82	83	19	15	62	75	−0.8	3.5
Vegetable/fruit/nut	83	88	25	15	66	80	−1.4	1.3
Nursery/greenhouse	86	92	9	10	89	86	12.9	9.9
Beef/hog/sheep	90	85	16	11	67	77	−0.9	1.9
Dairy	69	75	26	21	78	82	0.4	1.7
Poultry	68	78	26	23	83	88	52.1	44.2
Other livestock	82	88	12	11	54	63	−1.8	1.5

[1]Low debt is defined as a debt-asset ratio of 40% or less. All other farms have high debt—a ratio greater than 40%. [2]Average ratio of debts to assets for all farms (low debt and high debt) by region and production specialty. [3]All other farms have negative net farm incomes. [4]Average income returns to the equity invested in the farm business for all farms (positive and negative net farm incomes) by region and production specialty. [5]Data apply to approximately 1.7 million farms based on the 1987 survey sample and 1.6 million farms based on the 1986 sample.

mits analysts to look for differences among regions and farm types. Based on the survey, not all regions and farm types fared equally well in 1987, says Morehart.

Regionally, the greatest improvements on the debt side were in the Northern Plains (ND, SD, NE, KS) and Lake States (MI, WI, MN). In the Northern Plains, the share of farms with low debt levels increased from 67 percent in 1986 to 80 percent in 1987. In the Lake States, the share climbed from 68 to 78 percent (see accompanying table).

However, these two regions continued to lead all others in the percentage of farms with high debt. They also retained the highest debt-asset ratios in 1987, with Northern Plains farms carrying debt loads averaging 20 percent of their assets, and farms in the Lake States averaging 22 percent.

The regions with the fewest apparent debt problems were generally those with large numbers of small farms. The Northeast (MD to ME), Appalachia (TN, NC, KY, WV, VA), and the Southeast (AL, GA, SC, FL) had the highest percentages of farms

Not all regions and farm types fared equally well in 1987.

(90-91 percent) with low debt. The Northeast had the nation's lowest average debt-asset ratio—only 9 percent.

On the net farm income side, the strongest improvement was recorded by the Southern Plains (TX and OK), followed by the Delta (AR, LA, MS) and Mountain regions (ID, MT, WY, NV, UT, CO, AZ, NM). But the Corn Belt (IA, MO, IL, IN, OH) and Appalachia were the only regions with 80 percent or more farms registering positive net farm incomes in 1987.

Overall, the poorest showing was in the Lake States, where just 74 percent of farms had positive incomes. This was also the only region with a negative return to equity in 1987.

In the financial condition ratings, which combine debt status with net farm income, substantial improvements were recorded in several regions. In 1986, the Southern Plains was the only region where fewer than half the farms rated favorable. The figure rose to 69 percent in 1987.

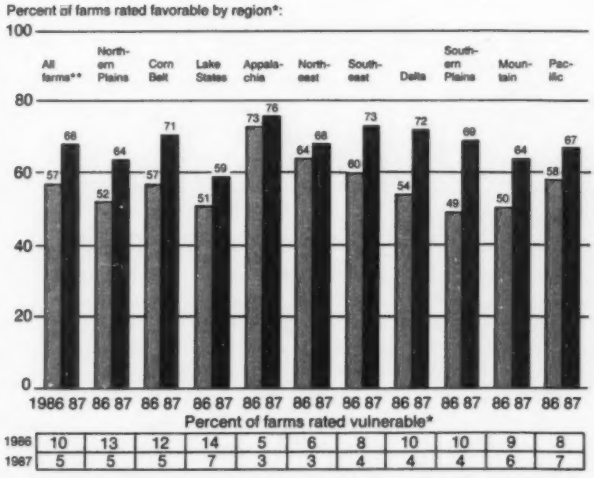
Appalachia and the Southeast boasted the highest favorable ratings for 1987, but both regions have a large number of low-income, low-resource farms.

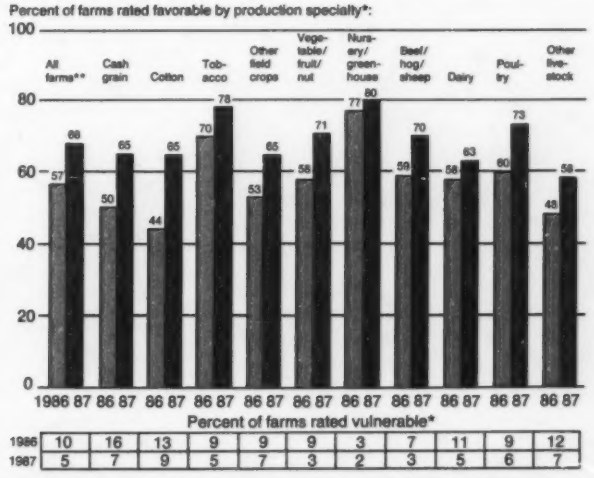
In 1986, five regions had 10 percent or more of their farms rated financially vulnerable. In 1987, the highest vulnerability figure was 7 percent for both the Lake States and the Pacific (CA, OR, WA). The lowest vulnerability ratings were in Appalachia and the Northeast—at 3 percent each.

Financial Conditions by Farm Type

Among production specialties (or farm types), all except the beef/hog/sheep category registered gains in the percentage of farms with low debt. The largest improvements between 1986 and 1987 were in cash grains and cotton. Yet 1987 debt

Variations in Financial Performance Narrowed from 1986 to 1987 as Favorable Ratings Rose and Vulnerable Ratings Dropped Sharply, Particularly for Regions and Farm Types Showing the Most Stress in 1986


Percent of farms rated favorable by region*:
100
80
60
40
20
0
All farms**
Northern Plains
Corn Belt
Lake States
Appalachia
Northeast
Southeast
Delta
Southern Plains
Mountain
Pacific
1986 87 86 87 86 87 86 87 86 87 86 87 86 87 86 87 86 87 86 87 86 87
57 68 52 64 57 71 51 59 73 76 64 68 60 73 54 72 49 69 50 64 58 67
Percent of farms rated vulnerable*
1986 10 13 12 14 5 6 8 10 10 9 8
1987 5 5 5 7 3 3 4 4 4 6 7


Percent of farms rated favorable by production specialty*:
100
80
60
40
20
0
All farms**
Cash grain
Cotton
Tobacco
Other field crops
Vegetable/fruit/nut
Nursery/greenhouse
Beef/hog/sheep
Dairy
Poultry
Other livestock
1986 87 86 87 86 87 86 87 86 87 86 87 86 87 86 87 86 87 86 87 86 87
57 68 50 65 44 65 70 78 53 65 58 71 77 80 59 70 58 63 60 73 48 58
Percent of farms rated vulnerable*
1986 10 16 13 9 9 9 3 7 11 9 12
1987 5 7 9 5 7 3 2 3 5 6 7

*A favorable rating indicates a positive net farm income as well as a debt-asset ratio of 40% or less. Vulnerable farms are those with negative net farm incomes and debt-asset ratios greater than 40%. Farms outside these two categories display a combination of favorable and vulnerable financial characteristics. They either have positive incomes with high debt or negative incomes with low debt. **Data apply to approximately 1.7 million farms based on the 1987 survey sample and 1.6 million farms based on the 1986 sample.

comparisons among farm types still reveal some fairly wide differences.

The nursery/greenhouse grouping had both the highest percentage of low-debt operations (92 percent) and the lowest average debt-asset ratio (10 percent). High proportions of low-debt farms were also found in the vegetable/fruit/nut group and the "other livestock" listing, which includes operations specializing in horses, farm-raised fish, goats, bees, laboratory animals, and similar enterprises (many are small, part-time farms).

Despite improvement, dairy, cotton, and poultry farms didn't fare as well in 1987, with fewer than 80 percent in the low-debt category.

Poultry farms had the highest average debt-asset ratio (23 percent), although many of these farms are large enough that they have the earnings capacity to carry higher debt loads. Debt-asset ratios were also relatively high for dairy (21 percent), cotton (20 percent), and cash grain farms (20 percent).

In the net farm income statistics, the gains from 1986 to 1987 were greatest for the vegetable/fruit/nut group, cash grains, and "other field crops." However, it was poultry, nursery/greenhouse, and tobacco farms that had the highest percentages with positive incomes in 1987.

Average returns on equity capital add a further dimension to the picture, reinforcing the data suggesting the fairly strong position for poultry and nursery/greenhouse operations. Poultry's average return, at 44 percent, far exceeded all others.

As was the case among regions, the combined debt-income measures for farm types suggest broad-based improvement in 1987. All types had more farms rated in a favorable position than in 1986, and fewer farms rated vulnerable.

The highest favorable ratings in 1987 were for nursery/greenhouse (80 percent) and tobacco farms (78 percent). The lowest favorable percentages were for "other livestock" (58 percent) and dairy (63 percent). Despite their strong improvement over 1986, both cash grains and cotton had below-average favorable ratings.

Sorting Through the Numbers Maze

According to economist Morehart, these various financial measures are important indicators of how different farm regions and farm types are faring from year to year.

Taking Agriculture's Pulse Is Especially Critical Now

When does the annual task of "taking the pulse of agriculture" become especially critical?

The answer: *When agriculture has just been through a major drought, and when lawmakers will soon be preparing to write a new farm bill for the 1990's.*

These two events explain why USDA analysts anticipate that the next Farm Costs and Returns Survey will receive even more attention than usual.

From February 13 to March 31, 1989, local interviewers trained by USDA will be contacting around 26,000 farmers and ranchers across the country for the fifth annual Farm Costs and Returns Survey. Each respondent represents many other farms of similar size and type. Those selected for the survey will be notified by letter in late January or early February.

The survey is managed by USDA's National Agricultural Statistics Service (NASS) and its 44 state offices.

In both NASS and the Economic Research Service, those directly involved with the annual survey have been preparing for the next one since early 1988.

"The upcoming survey will provide the first hard answers to a number of questions related to the 1988 drought," says economist Jim Johnson, who heads up the survey effort for ERS.

How, for example, did the drought affect the farm financial recovery that was evident in 1987? How did the drought affect income and debt levels in different sectors of agriculture and different regions? What impact did the drought assistance program have? Did production practices change because of the drought?

But the value of the survey is not limited to looking back over the year that just ended. The results of the forthcoming survey will be available in time for early deliberations over the 1990 farm bill.

In addition to general release to the public and the press, survey findings go to top policymakers in government, including both the Senate and House agriculture committees. Outside of Congress, farm organizations will be using the survey results as they develop their farm policy positions.

Other users include state governments, universities, extension agents, farm management consultants, agricultural lenders, and businesses that supply inputs to farmers.

"This is really the only mechanism there is for farmers to let lawmakers and the voting public know what it costs to produce the nation's food and fiber," says NASS statistician Doug Kleweno, who manages the production expenditures part of the survey.

"Our role is that of a fact-finding organization," he adds. "We collect and compile the data. We make sure it's reliable, or we don't use it. We (ERS and NASS) publish and distribute the results. But the information has to come from farmers."

According to Kleweno, the questions are detailed because the details are needed to measure the health and well-being of agriculture, to ensure the accuracy of the data, and to provide adequate information for policy decisions.

"Without this annual survey, we'd be out of touch and out of date," explains ERS' Johnson. "We'd have to rely on old information and educated guesses. We'd be treating agriculture, in all its diversity, as if it were one big farm because we wouldn't have the data to look beneath the aggregate numbers."

Farmers and ranchers participating in the survey receive a special summary of survey results for their state or region—and a guarantee of confidentiality. Survey data are fed into computers at NASS state offices, and the original questionnaires are shredded or burned so there is no record of any individual responses.

Generally, he says, the figures confirm that 1987's upturn was not confined to a few sectors of agriculture.

Disparities in financial performance among regions and farm types narrowed in 1987. Virtually all regions and farm types improved, and the improvements were typically greatest among those regions and commodities that had the poorest statistics in 1986.

However, the numbers also show that the financial recovery had not touched all farms—and that some regions and commodities lagged behind others.

Overall, farms in the Lake States continued to perform poorly relative to most other regions in 1987. Cash grain, cotton, and other field crops were not doing as well as the specialty crops. The poultry sector was outperforming the other livestock groupings by most measures.

When survey results are applied to the total number of farms in each region, the largest number of vulnerable farms in 1987 were located in the Corn Belt, followed by the Lake States. A similar computation by farm types indicates that the majority of highly stressed operations continued to be livestock and cash grain farms.

Using this data to assess the possible effects of the 1988 drought, ERS economist Andy Bernat concluded that the financial position of many commercial-size farms in the Midwest and Northern Plains has probably deteriorated during this past year.

"The areas most severely affected by the drought were those with generally higher proportions of farmers having high-debt or vulnerable ratings," Bernat says. "The drought hit a large number of farmers who had not fully recovered from the financial difficulties of the early to mid-1980's and are least able to handle the situation."

How many farms were dealt a serious setback, and how did the drought affect the 1987 picture of a strengthening farm economy?

The next Farm Costs and Returns Survey, covering 1988, will help answer these questions. The survey will be conducted this coming February and March, and a detailed summary of results will be available late next summer. □

[Based on information provided by economist Mitch Morehart and other analysts in the Agriculture and Rural Economy Division, Economic Research Service.]

Farm Groups Say They Use Survey Results To Help Protect Producers

High on the list of those who use information from USDA's annual Farm Costs and Returns Survey are the organizations that protect and promote the interests of farmers.

FARMLINE contacted representatives of a few of these farm groups for their views on the survey and the data it provides.

When we reached economist Terry Francl at the Illinois headquarters of the *American Farm Bureau Federation,* the subject of farm costs and returns was already on his mind.

"I just came from a meeting where we were talking about how important this information is going to be, particularly in regard to 1990 farm legislation," Francl said. "It's extremely important for us to have good, unbiased data to know what the true picture is in agriculture."

He noted that the Farm Bureau is "just one of a number of organizations that depend on this information in representing farmers' interests."

Even if such large-scale surveys could be funded and conducted privately, Francl sees an advantage in having USDA collect the data.

"There is a need for a set of numbers that everyone can utilize—analysts, Congress, state legislators," he said. "It is better to have accurate information that reflects what's actually happening than to have certain groups develop their own information that may have inherent biases."

Dean Ethridge, director of economic services for the *National Cotton Council* in Memphis, also emphasized the importance of having a "common ground" for discussion, particularly when his organization is "interacting with the policy process."

"We use the survey information primarily for policy assessment," he told *FARMLINE.* He listed such uses as gauging expected farm program participation and assessing the impact of payment limitations. His colleague at the council, agricultural economist Jess Barr, mentioned the value of the regional cost-of-production information provided by the survey. Barr uses it, along with prices, to measure the profitability of cotton and how that profitability compares with other field crops.

"It's extremely important for us to have good, unbiased data to know what the true picture is in agriculture." *—Terry Francl of the American Farm Bureau Federation.*

The data, Ethridge commented, "have to be collected by someone, and the infrastructure in USDA makes it the obvious place for doing that sort of thing."

He said the cotton council encourages its members to cooperate with the survey.

"The difficulty is that farmers are not the direct users of the information, but they're the only ones who can supply it. We need to reassure them that it is being utilized on their behalf," he said.

Peter Vitaliano is chief economist and director of policy analysis for the *National Milk Producers Federation.* Speaking to us from Arlington, VA, he agreed with Ethridge that direct use of the survey information by farmers is limited. Some dairy farmers, he explained, "do use the USDA data as a benchmark for comparison in looking at their own costs," but the "real value of the information is to the organizations that represent their interests."

"The farm costs survey generates a number of different USDA reports,

(continued on page 17)

REPORTS IN THE NEWS

Yearbook Focuses On Marketing

In today's rapidly changing marketplace, the ability to produce an unparalleled abundance of food does not guarantee success to U.S. farmers and food companies.

Success comes with searching out what consumers want and responding aggressively to that demand with new and improved products. The products also have to be delivered efficiently and promoted effectively to potential customers.

In other words, success requires as much attention to marketing as it does to production.

That's one message of the 1988 Yearbook of Agriculture, *Marketing U.S. Agriculture*. The yearbook describes the food marketing system from farmer to consumer—and the major developments affecting it.

Chapters on marketing farm products at home and abroad are written by experts from industry, academia, and government. Individual marketers of various foods, including cranberry juice, potatoes, beef, chicken, almonds, ice cream, grain, and soybeans, tell their own success stories in chapters exploring the marketing process.

A limited number of free copies of the yearbook are available from members of Congress. Copies can also be ordered from the Superintendent of Documents using the order form below.

Marketing U.S. Agriculture, 1988 Yearbook of Agriculture. *(Published December 1988; 336 pages, hardcover; $9.50.)*

Smokers Spend More, Smoke Less

Americans are spending more money than ever on tobacco, but they're smoking less. Higher tobacco expenditures mainly reflect higher cigarette prices.

Fewer cigarettes are being produced, cigarettes contain less tobacco than in the past, and more of the tobacco is foreign. Exports are also down. As a result, U.S. tobacco acreage and production have fallen.

Despite these industry trends, the United States remains the world's leading exporter of tobacco and the second largest producer, behind China. Tobacco is the nation's sixth largest cash crop.

Here are a few tobacco facts:

- U.S. consumers spent a record $35 billion on tobacco products in 1987, more than double the amount spent in 1977. Cigarette purchases alone added up to $33.5 billion in 1987.
- Based on the population age 18 and over, Americans smoked an average of 3,196 cigarettes per person in 1987. It was the 14th straight year of decline in per capita use. The highest use on record was 4,345 cigarettes per person in 1963.
- In 1986, the U.S. tobacco industry produced 658 billion cigarettes, down from more than 736 billion 5 years earlier.
- Federal revenues from tobacco products were $4.7 billion in 1987, up 117 percent since 1970. State revenues were up 83 percent to $4.5 billion. Together, federal, state, and local governments collected $9.4 billion in revenues from tobacco products in 1987.
- U.S. farmers planted 602,000 acres of tobacco in 1987, down from 921,000 in 1980 and 1.6-1.8 million acres in the early 1950's. Acreage in 1986 was the lowest since 1874.

This report covers the U.S. tobacco industry—farm production, grower prices, production costs and practices, output and use of tobacco products, trade, and government programs affecting tobacco.

The U.S. Tobacco Industry *by Verner Grise and Karen Griffin. (Published September 1988; 66 pages of text, charts, and data tables; GPO Stock No. 001-019-00586-6; $3.50.)*

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Specialty Produce: A Possibility For Diversification

What do casaba and crenshaw melons, kiwifruit, mangoes, yucca, lotus root, chili peppers, and jicama have in common? All are "specialty" produce, and all appear to be gaining popularity among consumers.

Imports traditionally meet most of this growing consumer demand, but more U.S. farmers are taking advantage of the opportunities in high-value produce. Unusual fruits and vegetables offer some producers a way to diversify and possibly to turn a few acres, or a few dozen, into a steady source of income.

Economist Catherine Greene of USDA's Economic Research Service says that specialty produce items include any number of exotic fruits, vegetables, or herbs that are imported or grown on a limited scale in the United States. Many of these items require intensive management and special marketing skills, she says.

Growers must be able to devote the time and labor necessary to produce a successful crop, and they must have an outlet to market their harvests. Many would-be consumers are still unfamiliar with the array of specialty products, and the major markets are located mainly in urban areas with large Hispanic and Asian populations.

According to Greene, some producers offer specialty items directly to consumers, either at the site of production or through farmers markets or local produce stands.

The Value of Several Specialty Vegetable Imports Has Risen Sharply Since 1981

	1981	1987
	$1,000	
Dasheens[1]	7,061	7,718
Endive[1]	2,113	7,669
Snow peas[2]	—	7,010
Chili peppers[1,2]	—	12,708
Chayote[1]	1,217	2,549
Fiddlehead ferns	28	135
Bamboo shoots[3]	16,588	31,305
Jicama[2]	2,353	3,216
Palm hearts	1,297	7,270
Yucca[4]	1,927	3,273

[1]Fresh, frozen. [2]Fresh, chilled. [3]Canned. [4]Fresh, frozen, sliced.

Supermarkets have dramatically expanded their produce sections to make room for exotic fruits and vegetables.

But more important, perhaps, is the growth in traditional markets. Over the last few years, supermarkets have dramatically expanded their produce sections to make room for exotic fruits and vegetables.

Restaurants have also become more adventuresome in their offerings. Their menus often incorporate exotic items, such as Belgian endive, radicchio, red and green lettuce, morels, shiitake mushrooms, tomatillos, and fresh herbs such as lemon grass, dill, and red, green, and purple basil.

Small-scale producers, particularly those far from urban centers, may have difficulty entering these markets on their own.

Grower cooperatives have helped some producers of items like exotic mushrooms, shallots, fiddleheads, and various herbs. For example, Trinity Marketing in Texas and the Michigan Marketing Association assist growers in those states in selling crops such as wild berries, wild leeks, golden nugget cherry tomatoes, celeriac, golden peppers, and French green beans.

International Tastes

The growing demand for specialty produce reflects a few broader developments, says Greene. Part of it is demand and part of it exposure. Consumers are more aware of how their diets affect their health. They often turn to fruits and vegetables and herbs and seasonings to add variety to their foods and provide flavorful options with less fat and fewer calories. Because they buy more produce, consumers demand greater variety, she adds.

The demand is also fed by the ever-increasing exposure of consumers to foreign foods. Immigration, particularly from Latin America, the Caribbean, and Asia, has resulted in larger ethnic populations with a wider range of tastes, and the introduction of many of these foods into the American mainstream. In addition, Americans travel more abroad, trying new foods native to the countries they visit.

Data on nationwide shipments provide one indication of what is happening in the specialty market. For instance, domestic shipments of chili peppers grew 30 percent annually between 1980 and 1987, from 3.8 million pounds to 32.1 million. Shipments of Boston and red and green leaf lettuce increased from 37 million pounds to 240 million, an average annual increase of 27 percent. At the same time, shipments of iceberg lettuce and tomatoes, two of the more popular traditional vegetables, grew only 3 percent annually, Greene says.

Although USDA does not collect national data on specialty crop production, several of the top fruit and vegetable producing states do. Both California and Florida monitor production of various specialties through their state statistical reporting service offices. Arizona began reporting acreage, production, and value of various specialty vegetables in 1981. Hawaii also lists acreage, yields, and production

Arizona and California Report Large Increases in Specialty Produce Acreage

	1981	1987
	harvested acres	
Arizona		
Bok choy	34	162
Endive	93	134
Escarole	46	53
Boston lettuce	105	422
Romaine lettuce	279	1,625
Leaf lettuce	600	2,287
Parsley	158	142
California		
Santa Claus and casaba melons	1,100	2,500
Crenshaw melon	900	1,200
Persian melon	450	600
Miscellaneous produce[1]	101,400	130,000

[1]Includes artichokes, cabbage, cucumbers, garlic, green onions, oriental vegetables, bell peppers, watermelons, and others.

Cassava

Bok Choy

Chinese Cabbage

Tomatillo

Daikon

estimates for certain specialties in its statistical reports. Maryland reports acreage and production of chili peppers.

Where Most Specialties Are Grown

Greene says that harvested acreage of most specialties has increased in all reporting states. In California, the harvested acreage of casaba and crenshaw melons, combined, increased from 2,000 acres in 1981 to 3,700 acres in 1987.

In Arizona, harvested acreage of the oriental vegetable bok choy climbed steadily from 34 acres in 1981 to 162 in 1987. Boston and Romaine lettuce, combined, rose from 384 acres to 2,047. Arizona growers also increased production of herbs, such as anise, arrugula, cilantro, and chili peppers, Greene says.

Hawaii has produced oriental vegetables like Chinese cabbage, daikon, lotus root, bitter melon, oriental squash, and Chinese peas for many years. Between 1981 and 1986, daikon acreage rose from 200 acres to 260. Ginger root more than doubled, from 64 acres to 145, over the same period.

Maryland saw the number of acres of chili peppers harvested more than triple from 1984 to 1986, from 10 acres to 35.

As for the future of specialty production, Greene says that one of the biggest prob-

Consumers Learning New Names: Bok Choy to Jicama

Here is a partial listing of specialty produce items that have recently gained popularity in the United States.

Vegetables

Beigian endive, also known as French endive, and whitloof chicory. This salad green has a small, slender head which is nearly white in color. (Escarole is a variety of endive with dark green leaves and slightly stronger flavor.) Endive is grown in California, Florida, and Arizona, and is imported from Belgium.

Bok choy, also known as Chinese chard, boy-toyo, pak-choy, paak-tsoi, and bok toy. Bok choy is native to Asia and belongs to the same family as napa (Chinese cabbage). There are four forms. The most common has thick white stalks with large, dark green, oval-shaped leaves. It is now grown in Arizona.

Boston lettuce. This lettuce is a variety of butterhead that is loose-leafed and has a delicate, buttery flavor. Boston lettuce is grown in Arizona.

Celeriac, also known as celery root, and apio root. Celeriac originally comes from the Mediterranean. It belongs to the pascal celery family, but is grown for its globe-shaped root, not its stalk. It is a long-season crop that is best harvested in cold, fall weather.

Chinese cabbage, also known as napa (nappa), siew choy (shew choy), pak choy, pe-tsai, won bok, wong nga paak, and patchio. A native of Asia and related to bok choy, this is probably the best known oriental vegetable. It is also grown in Arizona. There are at least 12 varieties divided into two categories. Varieties in one group produce heads, those in the other do not. The outside of the vegetable is pale green. The inside is yellowish to white.

Daikon, also known as Chinese turnip, Japanese radish, and mullang. Native to China and Japan, this root is in season all year. Production in the United States centers in Hawaii. There are three distinct types: spherical, oblong, and cylindrical.

Jicama, also known as yam bean root, chinese yam, fon goot, Mexican potato, and sicama. Pronounced hick'-a-ma, this tuber grows in the tropics and resembles the turnip in appearance and the water chestnut in flavor. Mexicans use it as the U.S. potato is used. It has a light brown to straw-colored skin and white flesh.

Lotus root. Lotus roots resemble flowers when sliced. They are mainly used in Asian cooking and are now grown in Hawaii.

Morels, also known as sponge mushrooms. These edible mushrooms are characterized by a brownish, sponge-like cap. They resemble a honeycomb, are tan to black in color, and are primarily grown in the Pacific Northwest, Wisconsin, and Michigan.

Radicchio. This vegetable looks like a miniature head of red cabbage with white stalks and veins. It is used in salads and is grown in California.

Romaine lettuce, also known as cos lettuce. This lettuce comes in a range of varieties. Its leaves are long and broad, and taper into thick hearts. California and Arizona are the major producing states, but romaine is also grown in Colorado, Florida, Georgia, Illinois, Indiana, Michigan, New York, New Jersey, Ohio, and Washington.

Shiitake mushrooms. These mushrooms

lems facing producers is the need for a solid and consistent marketing program.

"Some states already have programs to promote local production and consumption of produce, including specialty fruits and vegetables," she says. "Marketing challenges may also be met as more government, academic, and industry attention focuses on specialties. For example, the First National Symposium for New Crops was held this past fall to provide a national forum exploring the potential for new agricultural crops like specialty produce."

Learning how to grow specialty produce is another big problem for interested producers. A few states now have programs that encourage financially stressed farmers to grow specialty produce because of the market potential and profitability of such items. Recently, USDA granted $35,000 to fund a Virginia program aimed at helping that state's small farmers grow Belgian endive, a high-value crop.

Greene expects consumer demand to remain strong, creating additional opportunities for U.S. farmers to diversify into specialty produce. □

[Based on information provided by Catherine Greene of the Commodity Economics Division, Economic Research Service.]

have large, umbrella shaped caps that are brownish-black in color. They are cultivated in California, Pennsylvania, and Virginia.

Tomatillos, also known as ground tomatoes. Tomatillos resemble small green tomatoes. They grow on vines along the ground and taste like green plums. Tomatillos are walnut-sized, bright to yellowish-green, and have a parchment-like covering.

Yucca (yuca), also known as cassava, manioc, tapioca root, boniato, aypu, and camioc. Originally from Brazil, this root is grown throughout the tropics as a staple food for many. In the United States, it is grown in Florida. There are two species of the reddish-brown root, bitter and sweet. Both are poisonous unless cooked.

Herbs

Anise, also known as aniseed. Native to the Mediterranean, this plant has clustered, small yellow flowers and licorice-flavored seeds.

Arrugula. Originally from the Mediterranean, arrugula is used as a salad ingredient and as a flavoring. It is a member of the mustard family and has a fiery, peppery taste.

Basil. Basil is an easy-to-grow, vigorous, annual herb that comes in many varieties, from red, green, and purple, to cinnamon and Thai. Each variety has a different taste and can be used in several ways and in many dishes.

Cilantro, also known as coriander, Mexican parsley, and Chinese parsley. A Mediterranean native, this plant is an annual herb with green leaves resembling domestic parsley. Its leaves are known as cilantro, its seed, coriander. Both are widely used Latin American and oriental spices.

Dill, also known as dillweed. The light, feathery-leafed, annual herb is easy to grow, and like cilantro provides spices from its leaves as well as seeds.

Fiddlehead ferns. Baby fiddleheads are cooked as vegetables or used as garnish. Imports have increased in recent years.

Shallots. Closely related to the onion, shallots have milder flavored bulbs, which divide into smaller sections.

Wild leeks. Leeks are also related to the onion, but have a white, slender bulb and larger, flatter dark green leaves.

Fruit

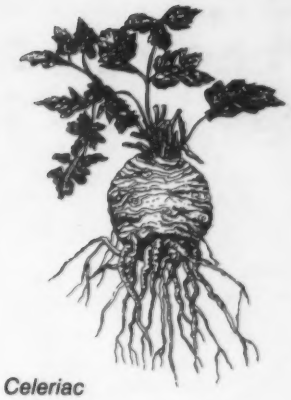
Bitter melon, also known as balsam-pear, balsam apple, and bitter cucumber. This tropical fruit is harvested before it matures. It is best as it begins to ripen. The long, oblong shaped fruit is covered with tubercles, or lumps, and it tapers at the end where the blossom appears.

Casaba melons. Casabas are winter melons with yellow rinds and sweet, whitish flesh.

Crenshaw melons. Crenshaws are globe shaped with golden-yellow skin and golden-pink flesh.

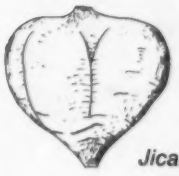
Kiwifruit, also known as Chinese gooseberry. Native to New Zealand, kiwifruit grow on a vine, have brownish, fuzzy skins, and bright green flesh, which tastes slightly acidic.

Mangos. Mangos come from tropical evergreen trees. The fruit has a thick skin which turns yellow, then red as it ripens. The flesh is yellow-orange and is sweet and juicy. Most mangos are imported from Mexico and Haiti, with supplies also coming from the West Indies, Central America, and Puerto Rico.

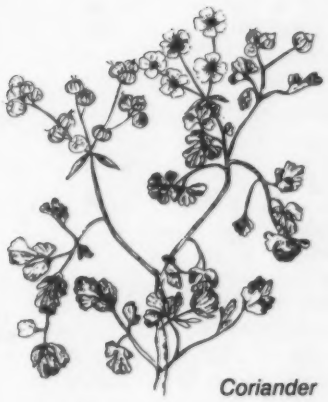


Celeriac

Balsam-pear



Jicama



Coriander

Chayote

Grapefruit Exports Lead U.S. Citrus Recovery

The sweetest news in the citrus industry these days may be grapefruit.

"Even though rising production around the world has intensified competition for U.S. grapefruit in world markets, U.S. exports of fresh grapefruit have increased dramatically," says economist Ben Huang of USDA's Economic Research Service. "During the 1987/88 marketing year, exports rose by 31 percent from the previous year, to more than 470,000 short tons."

On the home front, Huang says, "a greater demand for grapefruit juice is being created by changes in consumer tastes and preferences and living habits. Consumers are constantly seeking foods that are convenient and time saving, available year-round, and easily substituted for fresh products."

In this regard, he notes, "the development of convenient packages such as plastic containers and single-serving aseptic cartons has encouraged consumption. The availability of more mixed fruit juice containing grapefruit also has raised consumption. And the renewed consumer interest in nutrition and diet foods contributes to grapefruit's resurgence."

The industry's gains in recent years have boosted prices received by grapefruit growers.

"The returns for grapefruit have been strong, largely reflecting good export demand," says Huang. "From 1970-72 to 1985-87, the on-tree return equivalent—the price before picking and hauling to the packinghouse—for all U.S. grapefruit sales (fresh and processing) rose 134 percent. On-tree returns for all uses averaged a record $4.96 a box in 1986/87. Another record was set in 1987/88 at $5.39 per box."

He adds that grapefruit used for fresh sales returned an average on-tree value of $6.83 a box, while processing grapefruit garnered $4.07.

"Grapefruit consumed fresh consistently sold at a substantial premium over those for processing, in part influenced by strong export markets, which grew mainly in response to the depreciation of the dollar."

Although exports set a record in 1986/87, they still rose by 31 percent in 1987/88, to some 470,895 tons.

Exports Critical

"Fresh grapefruit exports are important to the industry not only because of their direct revenue, but also because of the price effect they have on the domestic market," says Huang. "Without exports, the market price for fresh grapefruit would be lower."

A Florida Department of Citrus study, says Huang, estimated an export market price effect for Florida grapefruit ranging from 9 cents per carton in 1977/78 to 19.3 cents in 1980/81. In recent years, domestic demand for fresh grapefruit has been sluggish, but strong export markets have boosted prices.

Although exports set a record in 1986/87, accounting for 15 percent of the U.S. grapefruit crop, they still rose by 31 percent in 1987/88, to some 470,895 short tons. The weaker dollar and increased promotion under USDA's Targeted Export Assistance (TEA) program have contributed to these records.

Japan, the leading U.S. customer for fresh grapefruit, boosted its purchases by 19 percent from a year before to comprise about half of total U.S. grapefruit exports, says Huang. Sales to the European Community (EC) have tallied large gains as well, going from an average of 15,079 short tons in 1970-72 to 77,463 in 1985-87.

"European consumers have developed a preference for U.S. pink grapefruit such as ruby red because of high quality and appearance characteristics," he says. "France and the Netherlands have been the leading customers, buying 63 percent of U.S. grapefruit exports to the EC in 1987/88."

Even exports to Canada, which had been falling, were up by 31 percent, albeit from only 28,000 short tons in 1986/87.

Exports of some processed grapefruit products have also done well. Sales abroad of frozen and canned concentrated juice have risen on the strength of growing consumer preference.

"Additionally, improved distribution, availability of better storage and marketing facilities, and increased advertising and promotion have contributed to expanding exports," says Huang. "Comparing 1970-72 with 1985-87, total exports of frozen concentrated grapefruit juice increased from 1.0 million gallons to 10.8 million (when measured in single-strength servings), and canned concentrated juice rose from 317,000 gallons to 1.9 million over the same period."

Japan Leading Market

With the signing of a U.S.-Japan agreement in 1984 to allow greater access of American grapefruit juice exports, Japan has replaced Canada as the leading importer. Japan was also the largest importer of single-strength grapefruit juice in 1986/87.

Grapefruit's gains, of course, are good for the citrus industry overall. Grapefruit is the second leading citrus crop in the United States, with a farm value of production at $472 million in 1987/88, or about one-third of that for oranges.

The gains also suggest that grapefruit production is recovering very well from the freezes of the early 1980's that hit Florida, the largest U.S. producer. (Freezes also became more familiar to Texas growers in 1983, when they lost much of their bearing acreage to a lingering cold snap.)

The severe freezes cut Florida's grapefruit production to the lowest level since 1970/71, 1.67 million short tons in 1982/83. Production has been gradually going up, reaching 2.12 million tons in 1986/87, and an estimated 2.29 million for the 1987/88 season.

"The estimate for the 1987/88 U.S. crop is 68 million boxes, or 2.8 million short tons, 8 percent above 1986/87," says Huang. "This is the fourth consecutive increase

since the freezes, but still 8 percent below the record crop in 1976/77."

The other major producers of grapefruit are California, Texas, and Arizona.

Texas grapefruit output peaked at 557,000 short tons in 1981/82 with increased production of the ruby red variety, which enjoys strong export demand. However, the 1983 freeze cut the Texas crop to just 128,000 short tons in 1983/84, and no commercial supplies at all were harvested in 1984/85. Modest gains have been recorded since then, with a crop of 77,000 tons in 1986/87, and an estimated crop of 152,000 tons in 1987/88.

As a result of the 1983 Texas freeze, California has become the second largest grapefruit producer. By 1986/87, California had reached a record of 305,000 short tons, almost 12 percent of the total U.S. crop.

In Arizona, production has fluctuated from 101,000 short tons in 1969/70 to 66,000 short tons in 1973/74. Another small crop of 48,000 tons is forecast for 1987/88 because the bearing acreage has remained low.

Since 1970, Huang says, total U.S. grapefruit output has varied widely because of the weather—from 3.03 million short tons in 1976/77 to 2.18 million in 1983/84.

Bearing Acreage Slashed

The U.S. grapefruit bearing area stood at nearly 200,000 acres (a record) in 1979/80. After the freezes, the area was only 145,900 acres in 1986/87.

Until the freezes hit, Florida's bearing acreage was going up, growing from 98,700 in 1969/70 to a peak of 128,600 in 1982/83. But it was cut back by four freezes to 105,100 acres in 1985/86, the lowest since 1970/71. The bearing acreage went up slightly in 1986/87 to 106,000.

Because of the freezes, the Florida grapefruit industry is undergoing a major transition.

"There has been a significant shift in Florida's grapefruit acreage," says Huang, "with a heavy increase on the state's east coast." Grapefruit acreage there was estimated at 82,382 in 1986, up 36 percent from 1969 and 8 percent from 1984. The east coast region in 1986 accounted for 70 percent of total Florida grapefruit acreage. The two leading counties, Indian River and St. Lucia, totaled more than 71,000 acres in 1986, 86 percent of the acreage on Florida's east coast.

"The heavy increase in acreage is primarily attributed to lower freeze hazards there and adequate water supplies," says Huang.

Grapefruit bearing acreage in California has been slightly above 20,000 since the late 1970's. In Texas, acreage fell from 30,000 in 1979/80 to 13,500 in 1985/86.

The differences between these states, in bearing acreage and output, also extends to prices received.

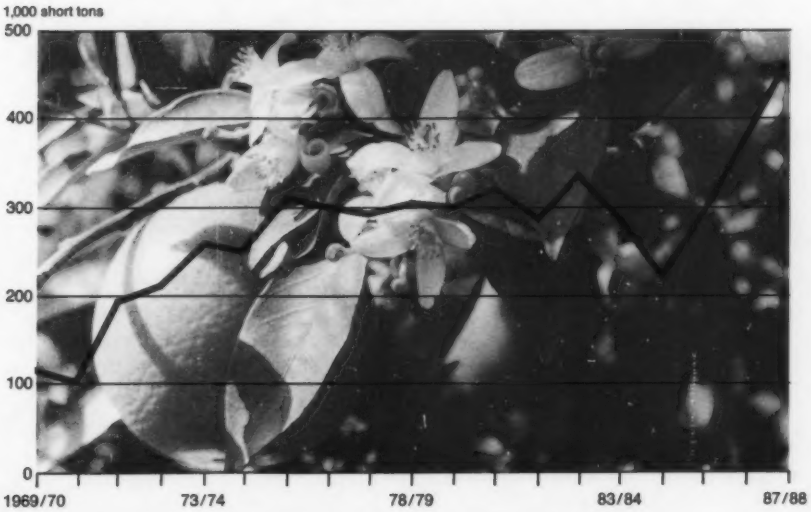
"There are large differences among producing states with respect to the level of on-tree grapefruit returns," says Huang.

Of course, all growers' annual prices are affected by yearly changes in the size of the grapefruit crop, supplies of competing fruit, cost of production, exports, population growth, and general economic factors here and abroad, such as disposable personal income, unemployment, and the rate of inflation. But there are regional differences as well in growers' on-tree returns, caused by crop size, variety, quality, utilization, and cost.

For example, Florida fresh market on-tree returns for grapefruit are generally higher than those in Texas, says Huang. "Lower Texas on-tree value is probably caused by the higher costs attributed to the packinghouse. Additionally, Texas clearly has some marketing inefficiency at the shipping point."

In contrast, Florida has a longer marketing season and seems to benefit from strengthening prices at the end of the season. Even so, on-tree returns for California fresh grapefruit are generally above Florida's,

U.S. Grapefruit Exports Have Been on a Record-Setting Pace For the Last Two Years*



*Figures are from USDA's Foreign Agricultural Service, and are for marketing years, September-August.

mainly because a larger share of California's fresh grapefruit is marketed during the summer, which is off-season for Florida shippers.

"Basically, less competition and the small quantity of grapefruit available for the fresh market contribute to higher returns in California," says Huang.

Florida appears to have a price advantage in grapefruit headed for processing.

"In general, on-tree returns for processing use are higher in Florida than in other producing states, largely because of better quality and stronger processor demand," says Huang. "On-tree returns for processing grapefruit in Arizona and California are low because processing is generally looked on as little more than a salvage operation." □

[Based primarily on information provided by economist Ben Huang of the Commodity Economics Division, Economic Research Service.]

Florida Oranges Back in the Sunshine

Florida's citrus growers can feel a collective chill just thinking about the devastating freezes of the early 1980's that destroyed millions of orange trees.

Orange output was slashed by weather that isn't supposed to strike with such severity (and frequency) in sunny Florida, the Citrus State.

Following the first widespread freeze of the decade, producers came up a little short in the 1980/81 season—harvesting only 7.8 million short tons, some 1.5 million tons less than the previous season. The next season was even worse, with a further drop-off of nearly 2 million tons.

It wasn't until the 1985/86 season that orange production held even with the previous year, at 5.4 million short tons, roughly 4 million tons less than the 1979/80 level.

The freezes forced back bearing acreage from 576,000 acres in 1979/80 to 367,000 by 1985/86. In 1986/87, for the first time this decade, bearing acreage grew—by nearly 8,000 acres.

What makes it easier, perhaps, for the state's growers to shake the shiver of such memories is the fact that citrus is finally coming back into its own.

Florida's 1987/88 orange crop is estimated at 6.2 million short tons, 15 percent more than the previous season and the largest in the last 5 years.

Moreover, says ERS economist Ben Huang, "last season's record juice yield and the larger Florida orange crop have resulted in a pack of 170 million gallons of frozen concentrated orange juice (FCOJ), up 18 percent from the 1986/87 season."

With greater domestic production, the total 1987/88 U.S. supply of FCOJ is also up from 1986/87's 265 million gallons, despite the fact that imports of frozen concentrate have been well below year-earlier levels.

"Prospects for a larger 1988/89 Florida orange crop probably will result in less U.S. demand for Brazilian orange juice," says Huang.

Back in 1969/70, imports of FCOJ from Brazil barely exceeded 1.3 million gallons. During the 1970's, imports generally increased.

But, beginning with the first freeze of the 1980's, imports soared. In the 1980/81 season, imports topped 200 million gallons (single-strength) of frozen concentrate. Imports from Brazil peaked in 1984/85, reaching 578 million gallons before settling at 505 million gallons in the 1986/87 season.

Brazil is expecting another good orange crop in 1988—about 10.4 million short tons, or almost 5 percent more than the previous year. With the current recovery in Florida's orange production, though, Brazil is looking to continue broadening its markets beyond the United States.

"As Florida recovers, Brazilian FCOJ sales are shifting back to Europe," says Huang. "Western Europe is expected to be the largest customer for Brazilian orange juice in the 1988/89 marketing season, taking as much as 45 percent of Brazil's total exports," says Huang.

Florida's orange recovery is taking place in two ways: replanting of trees killed by the freezes, and planting of new groves in the state's southern counties.

Huang notes that "frozen-out blocks" of groves are now being widely replaced by new tree plantings in the state's more northerly and traditional citrus zone.

But he adds that significant new acreage is being planted farther south. Weather is the primary factor behind this move.

New trees bear some fruit in 3 years and produce commercial quantities in 5 to 7 years, Huang says.

"The difficulty is that farmers are not the direct users of the information, but they're the only ones who can supply it. We need to reassure them that it is being utilized on their behalf." *—Dean Ethridge of the National Cotton Council.*

"We've directly used some of this information in our lobbying for the drought legislation, [and] we were able to secure some direct benefits for dairy farmers. . . ." *—Peter Vitaliano of the National Milk Producers Federation.*

"We want to make sure we get a fair shake in whatever farm legislation is down the road." *—Luther Markwart of the American Sugarbeet Growers Association.*

Farm Groups Use Survey

(continued from page 9)

and we pick up some information from all the reports," Vitaliano said. Accuracy, he added, is "always a concern, and we do some cross-checks of USDA's reported results."

The milk federation, he said, uses the information to "do our own projections building on the USDA estimates." That includes "trying to project the future impact of policy decisions."

"We've directly used some of this information in our lobbying for the drought legislation, (and) we were able to secure some direct benefits for dairy farmers in the legislation," Vitaliano reported.

Kansas farmer William Turrentine is a member of—and an occasional economic advisor to—the *National Association of Wheat Growers.* In addition, Turrentine is the chairman of a special farmer review board established by law to evaluate the way USDA collects and reports survey data on costs and returns.

His organization, like the others, uses the USDA survey information in its publications, producing articles "distilled" from USDA reports. "They boil it down into a package the average producer can understand," he said.

Within the wheat growers group, the survey results are used, according to Turrentine, as "tools in working with the Congress, assessing the health of the ag sector, and testing and developing policy theory."

Survey information also "relates back to the ag loan sector—the Farm Credit System and the insurance and banking people who lend to farmers," he said.

"The Farm Costs and Returns Survey is the initial element that picks up a tremendous amount of information," Turrentine said.

In his view, the need for this information is increasingly recognized by farmers. "It used to be that many farmers didn't trust these surveys. They worried that the information could be used against them."

"Today," he continued, "most farmers realize that information on costs, profitability, and efficiency is a valuable tool for them and their organizations. This is a tool they use in understanding what's happening in various parts of agriculture and in having a voice in the policy process."

To Luther Markwart, executive vice president of the *American Sugarbeet Growers Association,* the issues of farmer confidence in the survey and farmers' concerns about fair treatment in the policy process are related. Both may depend on how accurately and completely the survey measures the true costs of production.

"In order to mandate some minimum loan rate, Congress needs to know what our costs are," he said. "We want to make sure that the major cost items in different regions are not overlooked in this next survey."

Each year, the Farm Costs and Returns Survey includes separate cost-of-production surveys for certain commodities so that USDA can periodically update its cost estimates with hard data from farmers. One of the commodities that will receive this special attention in the forthcoming survey is sugar beets.

Markwart helped assemble an ad hoc committee of sugar beet growers to work with USDA "in developing the questions and ensuring that the questions would capture the true costs" of producing sugar beets in different parts of the country.

After the initial meeting, he noted that the growers on the committee were "impressed and reassured" by USDA's response to their advice and by the overall commitment "to put out the best possible survey."

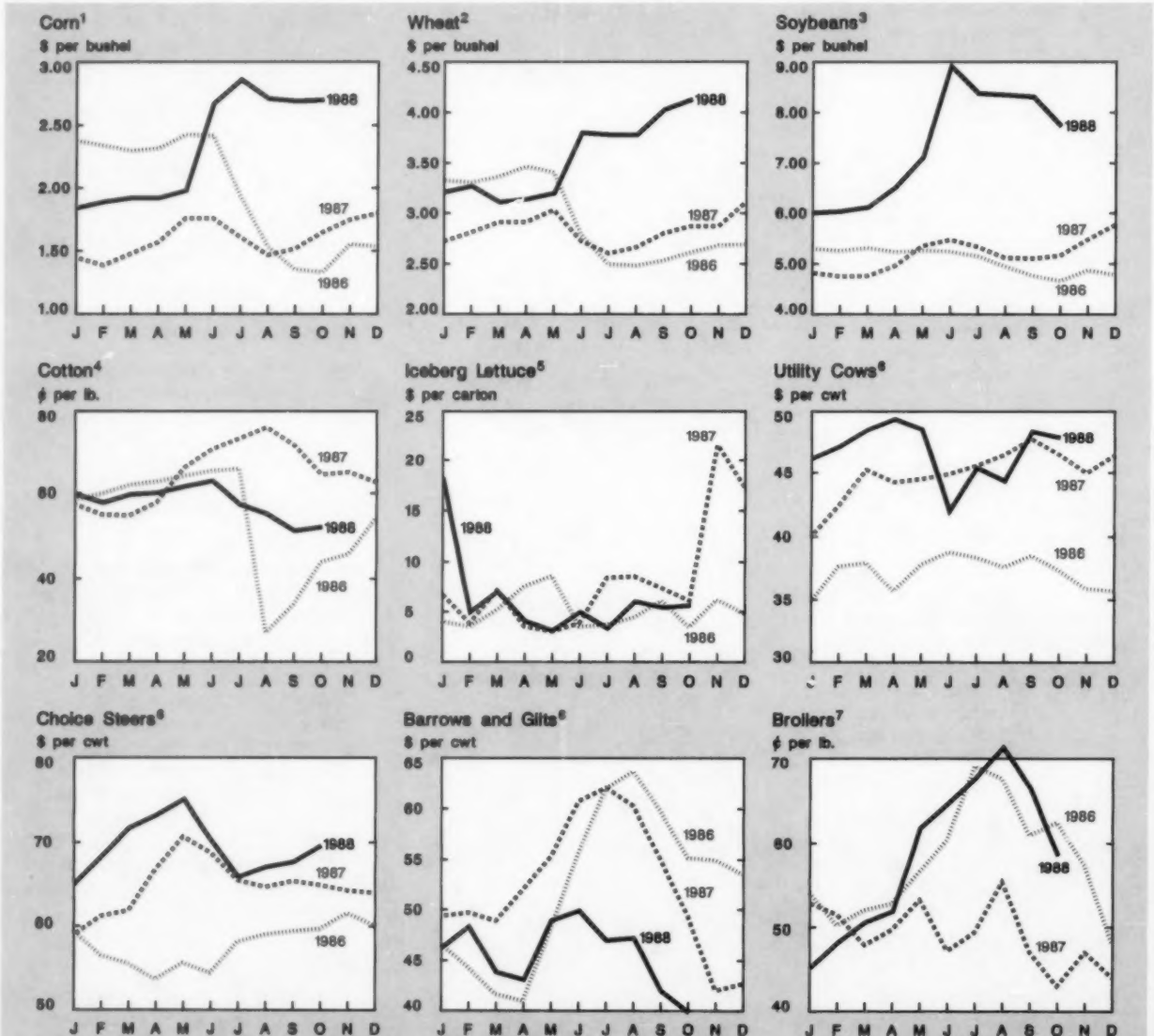
"None of these surveys are 100 percent accurate," he said, "but we want to make sure we get a fair shake in whatever farm legislation is down the road." Inaccurate information on costs of production, he added, can give lawmakers and the public an exaggerated impression of how much growers in certain regions are earning.

Within the sugar beet industry, cost data are important in looking at relative efficiencies among regions and at how U.S. costs compare with those of producers overseas, he said. □

FARMLINE TRENDS

Monthly Price Monitor

USDA's October 1988 index of farm prices was unchanged from September but was 13% above its year-earlier level. Corn, at $2.70 per bushel, held fairly steady, while wheat rose 10¢ to $4.13, its highest price since April 1983. After 4 months in the $8-$9 range, soybeans dropped to $7.74, down 57¢ from September. Cotton increased to 52.2¢ per lb. Among meat animals, utility cows declined 49¢ per cwt to $47.92, while choice steers were up nearly $2 to $69.61. Barrows and gilts slipped below $40 for the first time since November 1983. Broiler prices tumbled another 8¢ per lb. to 58.6¢—down almost 13¢ from the August peak of 71.4¢. All prices shown are monthly averages.

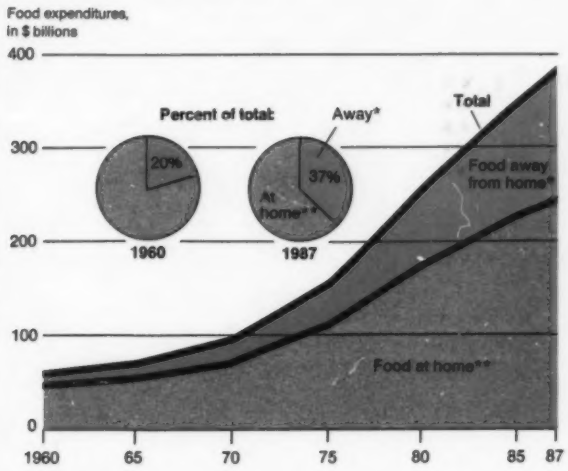


[1]No. 2 yellow, Central Illinois. [2]No. 1 HRW, Kansas City. [3]No. 1 yellow, Central Illinois. [4]SLM 1-1/16", spot market price. [5]Standard carton 24's, California-Arizona. [6]Omaha. [7]Wholesale, New York.

Food Spending and Prices Rise, But Farm and Income Shares Drop

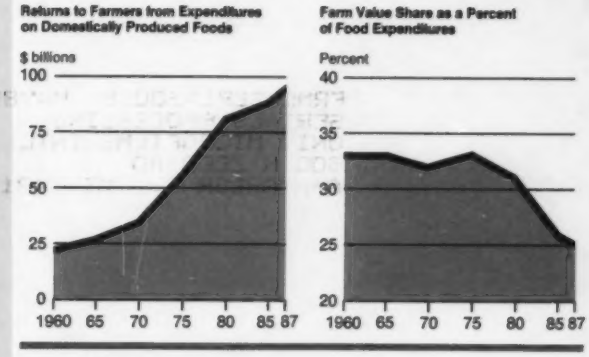
Chart data were provided by economist Denis Dunham of the Commodity Economics Division, Economic Research Service

Food Spending by American Families and Individuals Reached $388 Billion in 1987, with a Record 37% of the Total Spent on Eating Out

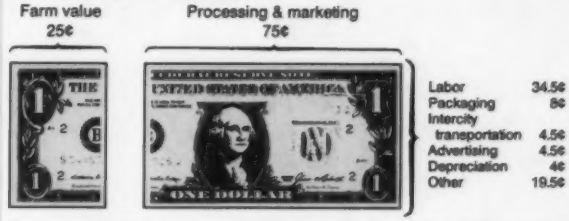


*Purchases from restaurants and other eating places (includes food furnished to employees). Excludes food paid for by government and business, such as expense-account meals and food donated to institutions. **Food purchased from grocery stores and other retail outlets primarily for consumption in the home. Excludes government-donated foods.

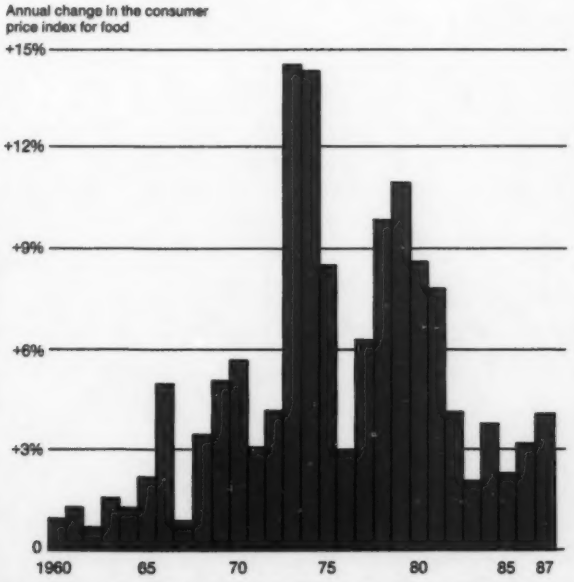
As Food Spending Rises, More Dollars Go to Farmers, But the Farm Share of the Food Dollar Is Dropping



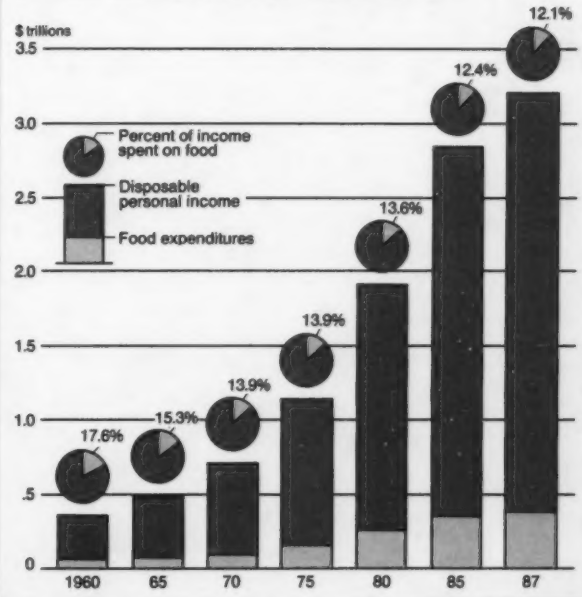
Dividing Up the 1987 Food Dollar



Retail Food Prices Have Risen Every Year Since 1960, But Annual Increases Have Moderated from the Sharp Jumps of the 1970's



Because Personal Income Is Up More Than Food Prices and Expenditures, Americans Are Spending a Smaller Percentage of Their Income on Food



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